



R2500F thru R5000F

High Voltage Fast Recovery Rectifiers
Reverse Voltage 2500 to 5000 Volts Forward Current 0.2 Ampere

Features

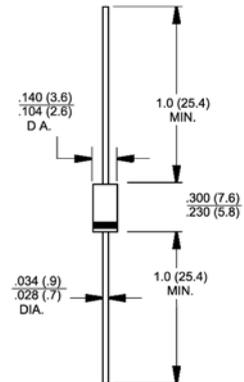
- ◆ Fast switching
- ◆ Low leakage
- ◆ High current capability
- ◆ High surge capability
- ◆ High reliability



DO-204AC (DO-15)

Mechanical Data

- ◆ Case: Molded plastic DO-204AC (DO-15)
- ◆ Epoxy: Device has UL flammability classification 94V-0
- ◆ Lead: MIL-STD-202E method 208C guaranteed
- ◆ Mounting position: Any
- ◆ Weight: 0.014 ounce, 0.395 gram



Dimensions in inches and (millimeters)

Maximum Ratings and Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

Single phase, half wave, 60 Hz, resistive or inductive load.

For capacitive load, derate current by 20%.

Parameter	Symbols	R2500F	R3000F	R4000F	R5000F	Units
Maximum repetitive peak reverse voltage	V_{RRM}	2500	3000	4000	5000	Volts
Maximum RMS voltage	V_{RMS}	1750	2100	2800	3500	Volts
Maximum DC blocking voltage	V_{DC}	2500	3000	4000	5000	Volts
Maximum average forward rectified current at $T_A=50^\circ\text{C}$	$I_{F(AV)}$	200				mAmps
Peak forward surge current, 8.3 ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	30.0				Amps
Maximum instantaneous forward voltage at 0.5A/0.2A DC	V_F	4.0	5.0	6.5		Volts
Maximum DC reverse current at rated DC blocking voltage @ $T_A=25^\circ\text{C}$	I_R	5.0				μA
Maximum full load reverse current average, full cycle .375" (9.5mm) lead length at $T_L=55^\circ\text{C}$	$I_{R(AV)}$	100				μA
Maximum reverse recovery time (Note 1)	t_{rr}	500				ns
Operating junction and storage temperature range	T_J, T_{STG}	-55 to +150				$^\circ\text{C}$

Notes: 1. Test Conditions: $I_F=0.5\text{A}$, $I_R=1.0\text{A}$, $I_{RR}=0.25\text{A}$

RATINGS AND CHARACTERISTIC CURVES

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

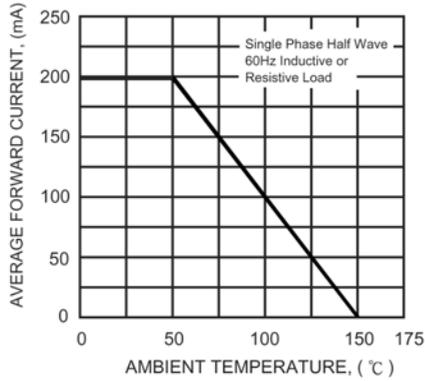


FIG. 2 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

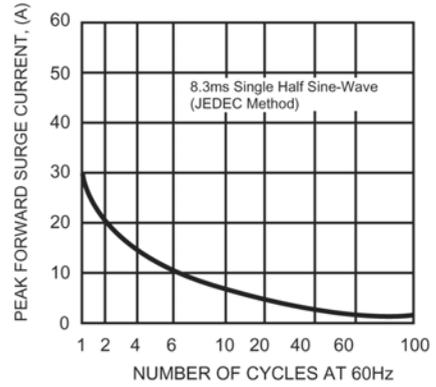


FIG. 3 - TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC

